

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) ~~Piezoceramie~~ A piezoceramic composition with the general molecular formula $Pb_{1-a}RE_bZr_xTi_yTR_zO_3$ $Pb_{1-a}RE_bZr_xTi_yTR_zO_3$, where a, x and y are each greater than 0, in which

- RE is at least one rare earth metal selected from the group consisting of europium, gadolinium, lanthanum, neodymium, praseodymium, promethium ~~and/or~~ and samarium with a rare earth metal proportion b,

- TR is at least one transition metal selected from the group consisting of chromium, iron ~~and/or~~ and manganese with a transition metal valency W_{TR} and a transition metal proportion z and

- ~~The~~ a following relationship applies: $z > b/(4 - W_{TR})$.

2. (currently amended) ~~Piezoceramie~~ The piezoceramic composition in accordance with claim 1, in-which wherein the rare earth metal proportion is selected from a range of 0.2 mol% to 3 mol%.

3. (currently amended) ~~Piezoceramie~~ The piezoceramic composition in accordance with ~~Claim~~ claim 1, ~~in which~~ wherein a sum of the rare earth metal proportion and of the transition metal proportion is less than 6 mol%.

4. (currently amended) ~~Piezoceramie~~ The piezoceramic composition in accordance with claim 1, ~~in which~~ wherein the RE is a single rare earth metal and TR is selected from at most two transition metals or TR is a single transition metal and RE is selected from at most two rare earth metals.

5. (currently amended) ~~Piezoceramie~~ The piezoceramic composition in accordance with claim 1, ~~with~~ wherein a value for a mechanical quality factor Q_m ~~which~~ is selected from a range of 50 up to and including 1800.

6. (currently amended) ~~Piezoceramie~~ The piezoceramic composition in accordance with claim 1, ~~with~~ wherein the composition has a Curie-temperature T_c lying above 280°C.

7. (currently amended) ~~Method~~ A method for producing a piezoceramic composition in accordance with ~~one~~ claim 1, comprising growing at a specific sinter temperature in which a maximum particle growth of the piezoceramic composition is determined ~~at a specific sinter temperature~~.

8. (currently amended) ~~Method~~ The method in accordance with ~~Claim~~ claim 7, ~~where~~ wherein the following steps are performed:

a) ~~Definition of~~ defining the rare earth metal proportion b,

b) ~~Definition of~~ defining the transition metal proportion z,

e) ~~Sintering of~~ sintering the piezoceramic composition at the sinter temperature, and

d) ~~Determining~~ determining a particle size of the sintered piezoceramic composition ~~and~~

e) ~~Repeating steps b) to d), with the transition metal proportion z being varied.~~

9. (currently amended) ~~Method~~ The method in accordance with ~~Claim~~ claim 7, ~~with~~ wherein the transition metal iron ~~with~~ has an iron proportion z_{Fe} and the transition metal manganese ~~with~~ has a manganese proportion Z_{Mn} ~~being used~~, so that the relationship to $z_{Fe} + 2 \cdot Z_{Mn}, > b$ is produced and with the variation of the manganese proportion Z_{Mn} , ~~essentially the a~~ dissipation factor $\tan \delta$ of the composition and with ~~the a~~ variation of the iron proportion z_{Fe} , ~~essentially the~~ setting a maximum value particle growth of the composition ~~are set~~.

10. (currently amended) ~~Piezoceramie~~ The piezoceramic body with a piezoceramic composition in accordance with claim 1.

11. (currently amended) ~~Piezoceramie~~ The piezoceramic body in accordance with ~~Claim~~ claim 10, ~~featuring~~ wherein a metallization is selected from at least one of the group consisting of silver, copper ~~and/or~~ and palladium.

12. (currently amended) ~~Piezoceramie~~ The piezoceramic body in accordance with ~~Claim~~ claim 11, ~~in which~~ wherein a proportion of palladium is selected ranging from 0% up to ~~[[an]]~~ and including 30%.

13. (currently amended) ~~Piezoceramie~~ The piezoceramic body in accordance with ~~Claim~~ claim 12, ~~in which~~ wherein the proportion of palladium amounts to a maximum of 5%.

14. (currently amended) ~~Piezoceramie~~ The piezoceramic body in accordance with claim 10, ~~featuring~~ wherein a monolithic multilayer construction in which piezoceramic layers with the piezoceramic composition and electrode layers with the metallization are arranged alternating above one another.

15. (currently amended) ~~Piezoceramie~~ The piezoceramic body in accordance with claim 10, which is a component selected from the group consisting of an actuator, a bending converter, a motor ~~and/or~~ and a transformer.

16. (currently amended) ~~Method~~ A method for producing a piezoceramic body, ~~with the steps comprising:~~

~~f) Provision of~~ providing a green body with a piezoceramic composition in accordance with claim 1; and

~~g) Sintering of~~ sintering the green body to the piezoceramic body.

17. (currently amended) ~~Method~~ The method in accordance with ~~Claim~~ claim 16, ~~where a~~ wherein the green body is provided with a metallization which is at least one selected from the group consisting of silver, copper ~~and/or~~ and palladium.

18. (currently amended) ~~Method~~ The method in accordance with ~~Claim~~ claim 16, ~~where~~ wherein the sintering is undertaken in an oxidizing or reducing sinter atmosphere.

19. (currently amended) ~~Method~~ The method in accordance with ~~[[one]]~~ claim 16, ~~with~~ wherein a sinter temperature ranging from 900°C to 1100°C inclusive ~~being~~ is selected for sintering.

20. (currently amended) ~~Method~~ The method in accordance with ~~[[one]]~~ claim 16, ~~with a~~ wherein the green body with a plurality of particle growth seeds ~~being~~ is used with the piezoceramic composition.